

COSMIC RAYS AS A TOOL FOR HELIOSPHERE, MAGNETOSPHERE AND ATMOSPHERE MONITORING

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We present a spectrographic global survey method to split the cosmic ray variations into components of the interplanetary, geomagnetospheric and atmospheric origin from ground-based observations of the cosmic ray intensity. We show a possibility to use all the available suite of ground-based instrumentation recording cosmic rays (global network of neutron monitors located at different locations and altitudes, ground- and underground-based muon telescopes, etc.) for such studies without involving the data from aerologic atmospheric sounding. As a demonstration of the method functionality, we provide the calculation results for the variations in the isotropic flux, pitch angle anisotropy of primary cosmic rays in the interplanetary space, changes in the planetary system of geomagnetic cutoff rigidities for every observational hour, as well as the atmosphere temperature above the point of observation of cosmic ray charged components for selected time intervals.